

(FILE 'HOME' ENTERED AT 16:57:28 ON 24 JUL 2000)

FILE 'REGISTRY' ENTERED AT 16:57:34 ON 24 JUL 2000

L1 STRUCTURE UPLOADED

L2 2 SEA SSS FUL L1

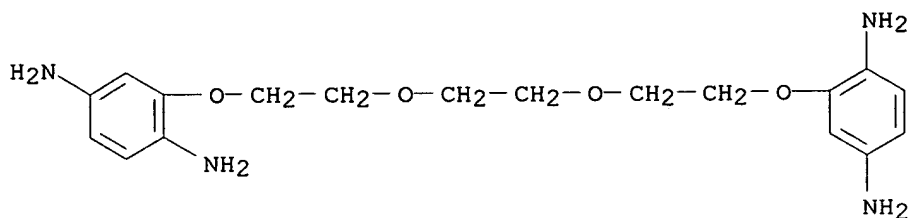
D 1-2

FILE 'CAPLUS' ENTERED AT 16:58:20 ON 24 JUL 2000

L3 32 SEA L2

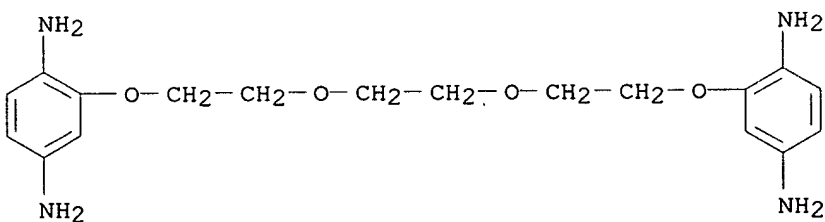
D IBIB ABS HIT 1-32

L2 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2000 ACS
 RN 159661-45-7 REGISTRY
 CN 1,4-Benzenediamine, 2,2'-[1,2-ethanediylbis(oxy-2,1-ethanediylloxy)]bis-
 (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN 1,8-Bis(2,5-diaminophenoxy)-3,6-dioxaoctane
 FS 3D CONCORD
 MF C18 H26 N4 O4
 CI COM
 SR CA
 LC STN Files: CA, CAPLUS, TOXLIT, USPATFULL



7 REFERENCES IN FILE CA (1967 TO DATE)
 3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L2 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2000 ACS
 RN 144644-13-3 REGISTRY
 CN 1,4-Benzenediamine, 2,2'-[1,2-ethanediylbis(oxy-2,1-ethanediylloxy)]bis-,
 tetrahydrochloride (9CI) (CA INDEX NAME)
 DR 220118-54-7
 MF C18 H26 N4 O4 . 4 Cl H
 SR CA
 LC STN Files: CA, CAPLUS, TOXLIT
 CRN (159661-45-7)

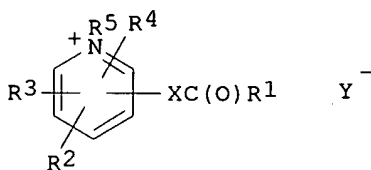


● 4 HCl

23 REFERENCES IN FILE CA (1967 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 27 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 10 OF 32 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1999:254092 CAPLUS
 DOCUMENT NUMBER: 130:301487
 TITLE: Use of onium aldehydes and onium ketones for dyeing
 fibers containing keratin
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
 PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
 SOURCE: Ger. Offen., 10 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19745356	A1	19990415	DE 1997-19745356	19971014
WO 9918916	A2	19990422	WO 1998-EP6308	19981005
WO 9918916	A3	19990701		
W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9896295	A1	19990503	AU 1998-96295	19981005
PRIORITY APPLN. INFO.:			DE 1997-19745356	19971014
			WO 1998-EP6308	19981005
OTHER SOURCE(S):			MARPAT 130:301487	
GI				



AB Combinations of onium aldehydes and ketones [I; R1 = H, C1-4 alkyl, aryl, heteroaryl; R2-R4 = H, halo, C1-4 alkyl or alkoxy or acyl, OH, NO2, CF3, aryl, (substituted) amino, etc.; R5 = C1-4 alkyl, aryl, heteroaryl, aralkyl; X = bond, (substituted) vinylene or phenylene; Y = halide, PhSO3-, p-toluenesulfonate, MeSO3-, F3CSO3-, ClO4-, HSO4-, etc.] with .gtoreq.1 compd. contg. a primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd., or their reaction products, are useful for prodn. of dyes for hair, wool, furs, and synthetic fibers without requiring the use of oxidizing agents such as H2O2. The amines and hydroxy compds. may include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. Dyeing may be enhanced by addn. of ammonium or metal salts. Thus, a mixt. of 4-formyl-1-methylpyridinium benzenesulfonate 10, 2-(methylamino)-3-amino-6-methoxypyridine-2HCl 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray hair for 30 min at 30.degree. to produce an intense dark violet color.

IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6, 4-Aminosalicylic

acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid
 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5,
 7-Amino-4-hydroxynaphthalene-
 2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic
 acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic
 acid
 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine,
 biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5,
 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid
 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0,
 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9
 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3,
 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol,
 biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6,
 Phloroglucinol 118-12-7, Fischer's base 118-70-7, 4,5,6-
 Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5,
 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-
 sulfonic acid 120-72-9D, Indole, derivs. 120-80-9, 1,2-Benzenediol,
 biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3
 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1,
 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6,
 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies
 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4,
 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0,
 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8,
 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-73-1,
 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6,
 Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0,
 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3,
 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5,
 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5,
 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
 2-Aminoquinoline
 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
 2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2,
 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3,
 4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-
 phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6 623-09-6,
 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5,
 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,
 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3,
 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole
 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
 1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid
 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1,
 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
 p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole
 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic
 acid 3784-97-2, 2-Formyl-1-methylpyridinium iodide 3855-78-5,
 2,3,4-Trimethylpyrrole 4173-87-9 4318-76-7, 2,5-Diaminopyridine
 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene
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 Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1,
 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-
 Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1,
 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-indolium iodide
 5434-20-8, 3-Aminophthalic acid 5689-64-5, 4-Benzoyl-1-methylpyridinium
 bromide 5718-83-2, Rhodanine-3-acetic acid 5959-52-4,
 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol 6259-50-3
 6399-72-0 6628-04-2, 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole
 7169-34-8, Coumaranone 7216-42-4 7336-20-1, Disodium

4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1,
 N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 790-04-8,
 4-Acetyl-1-methylpyridinium iodide 7680-72-0 7749-47-5,
 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
 2-(2-Hydroxyethyl)phenol
 13432-98-9 13441-53-7, 4-Formyl-1-methylpyridinium iodide 13441-54-8,
 3-Formyl-1-methylpyridinium iodide 13754-19-3, 4,5-Diaminopyrimidine
 14268-66-7, 3,4-Methylenedioxyaniline 14549-14-5, 2-Acetyl-1-
 methylpyridinium iodide 16082-33-0, 3,5-Diaminopyrazole 16867-03-1,
 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole 20103-09-7,
 2,5-Dichloro-p-phenylenediamine 21640-65-3 22715-34-0,
 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine
 23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2
 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5,
 5,6-Dihydroxyindoline 31937-78-7 32526-76-4 32526-77-5
 34285-40-0,
 4-Benzoyl-1-methylpyridinium iodide 41946-53-6 49647-58-7,
 2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3,
 4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-
 hydroxyethylamino)phenol 56216-28-5 60320-10-7 61224-35-9
 61693-42-3 62496-02-0, 2-(Methylamino)-4,5,6-triaminopyrimidine
 66566-48-1 66635-40-3 69984-77-6, 7-Aminobenzimidazole 70643-19-5,
 2,4-Diaminophenoxyethanol 74918-21-1 79190-74-2, 2-Formyl-1-
 methylpyridinium chloride 79352-72-0 80030-92-8 82228-89-5
 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1
 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,
 4-Hydroxyindoline 90817-34-8, 3-Amino-2-(methylamino)-6-methoxypyridine
 91929-10-1 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9
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 117891-56-2 122438-75-9 122587-42-2 126335-41-9 128729-30-6
 130582-56-8 135043-64-0 137290-86-9 **144644-13-3**
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 202525-74-4 202525-75-5 202525-76-6 202525-77-7 202525-78-8
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 223397-42-0 223397-43-1 223397-44-2 223397-45-3 223397-46-4
 223397-47-5 223397-48-6 223397-49-7 223397-51-1 223397-52-2
 223397-53-3 223397-54-4 223397-55-5 223397-56-6 223397-57-7
 223397-58-8 223397-59-9

RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological
 study); USES (Uses)

(use of onium aldehydes and onium ketones for dyeing keratin fibers)

L3 ANSWER 11 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:254091 CAPLUS

DOCUMENT NUMBER: 130:316424

TITLE: Use of compositions containing indanones for dyeing fibers containing keratin

INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst

PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

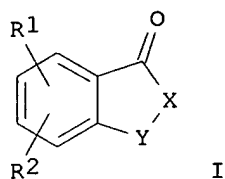
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19745355	A1	19990415	DE 1997-19745355	19971014
WO 9918914	A2	19990422	WO 1998-EP6306	19981005
WO 9918914	A3	19990624		
W: AU, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9911498	A1	19990503	AU 1999-11498	19981005
PRIORITY APPLN. INFO.:			DE 1997-19745355	19971014
			WO 1998-EP6306	19981005
OTHER SOURCE(S):			MARPAT 130:316424	
GI				



AB Combinations of indanones [I; R1, R2 = H, halo, C1-4 alkyl or alkoxy or acyl, OH, NO2, CO2H, SO3H, (substituted) amino, etc.; or R1R2 complete a condensed benzene ring; X = C:O, CHNO2, C:NOH; Y = CH2, CH2CH2, C:O; X, Y are not both C:O] with .gtoreq.1 compd. contg. a primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd., or their reaction products, are useful for prodn. of dyes for hair, wool, furs; and synthetic fibers without requiring the use of oxidizing agents such as H2O2. The amines and hydroxy compds. may include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. Dyeing may be enhanced by addn. of ammonium or metal salts and addnl. direct dyes. Thus, a mixt. of 2-nitro-1,3-indandione 10, 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane-4HCl 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered,

adjusted to pH 6, and applied to gray hair for 30 min at 30.degree. to produce an intense blue-black color.

IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,

4-Aminosalicylic

acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5,

7-Amino-4-hydroxynaphthalene-

2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic

acid

90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-16-9, Benzothiazole 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid

103-82-2,

Phenylacetic acid, biological studies 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-12-7, Fischer's base 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide

119-70-0,

4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9, 1H-Indole, biological studies 120-80-9, 1,2-Benzenediol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6 623-09-6, 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1125-60-6, 5-Aminoisoquinoline 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid 3674-33-7, 2-Nitro-1,3-indandione 3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid

5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol
6259-50-3 6229-72-0 6628-04-2, 4-Aminoquinoline 6967-12-0,
6-Aminoindazole 7169-34-8, Coumaranone 7330-0-1, Disodium
4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1,
N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol
13167-95-8, Indan-1,2,3-trione 2-oxime 13754-19-3,
4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxyaniline 15028-10-1, 2-Oximino-1-indanone
16082-33-0, 3,5-Diaminopyrazole 16214-27-0, 1,2-Indandione
16867-03-1,
2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole 20103-09-7,
2,5-Dichloro-p-phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-
triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7,
3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2 28020-38-4,
2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate
53666-79-8
53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0,
2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 60320-10-7
61224-35-9 61693-42-3 62496-02-0, 2-(Methylamino)-4,5,6-
triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6,
7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1
79352-72-0 80030-92-8 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-
dimethylpyridine 84540-50-1 85679-78-3, 3,5-Diamino-2,6-
dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8,
3-Amino-2-(methylamino)-6-methoxypyridine 93841-24-8,
2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7 114402-54-9
115423-86-4 126335-41-9 128729-30-6 130582-56-8 135043-64-0
137290-86-9 **144644-13-3** 159661-42-4 202525-71-1
202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7
202525-78-8 202525-79-9 215377-52-9 220118-56-9 223384-47-2
RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological
study); USES (Uses)
(use of compns. contg. indanones for dyeing fibers contg. keratin)

L3 ANSWER 12 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:254090 CAPLUS
DOCUMENT NUMBER: 130:301486
TITLE: Use of compositions containing dehydroascorbic acid
for dyeing fibers containing keratin
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19745354	A1	19990415	DE 1997-19745354	19971014
WO 9918917	A2	19990422	WO 1998-EP6310	19981005
WO 9918917	A3	19990624		
W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9911500	A1	19990503	AU 1999-11500	19981005
PRIORITY APPLN. INFO.:				
			DE 1997-19745354	19971014
			WO 1998-EP6310	19981005

AB Combinations of dehydroascorbic acid with .gtoreq.1 compd. contg. a
primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd.,
or their reaction products, are useful for prodn. of dyes for hair, wool,

furs, and synthetic fibers without requiring the use of oxidizing agents such as H₂O₂. The amines and hydroxy compds. include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. Dyeing may be enhanced by addn. of ammonium or metal salts. Thus, a mixt. of dehydroascorbic acid 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol,

and

1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray hair for 30 min at 30.degree. to produce an intense violet-brown color.

IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,

4-Aminosalicylic

acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5,

7-Amino-4-hydroxynaphthalene-

2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic

acid

90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide

119-70-0,

4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9D, Indole, derivs. 120-80-9, 1,2-Benzenediol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 490-83-5D, derivs., acetals 496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,

2-Aminoquinoline

582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6 623-09-6, 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic

acid 3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0, 3,4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2, 4-Aminoquinoline 6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7, 2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0, 3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 60320-10-7 61224-35-9 61693-42-3 62496-02-0, 2-(Methylamino)-4,5,6-triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0 80030-92-8 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8, 3-Amino-2-(methylamino)-6-methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7 114402-54-9 115423-86-4 126335-41-9 128729-30-6 130582-56-8 137290-86-9 **144644-13-3** 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9 220118-56-9 223383-77-5

RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); USES (Uses)
(use of compns. contg. dehydroascorbic acid for dyeing keratin fibers)

L3 ANSWER 13 OF 32 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1999:254088 CAPLUS
 DOCUMENT NUMBER: 130:301484
 TITLE: Use of malonaldehyde derivatives for dyeing fibers containing keratin
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
 PATENT ASSIGNEE(S): Henkel K.-G.A.A., Germany
 SOURCE: Ger. Offen., 12 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19745292	A1	19990415	DE 1997-19745292	19971014
WO 9919558	A2	19990422	WO 1998-EP6311	19981005
WO 9919558	A3	19990617		

W: AU, JP, US

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.:

DE 1997-19745292 19971014

OTHER SOURCE(S):

MARPAT 130:301484

AB Combinations of malonaldehyde derivs. (R1)2CHCH(R3)CH(OR2)2 or HC.tplbond.CCH(OR1)(OR2) [R1, R2 = C1-6 alkyl, R3 = H, C1-4 alkyl or alkoxy, hydroxy, alkoxy, (substituted) aryl or heteroaryl; any 2 of R1-R3 may complete a 5-7-membered ring] with .gtoreq.1 compd. contg. a primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd., or their reaction products, are useful for prodn. of dyes for hair, wool, furs, and synthetic fibers without requiring the use of oxidizing agents such as H2O2. The amines and hydroxy compds. may include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. Dyeing may be enhanced by addn. of ammonium or metal salts. Thus, a mixt. of malonaldehyde bis(diethyl acetal) 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray hair for 30 min at 30.degree. to produce an intense brown-orange color.

IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 102-52-3, Malonaldehyde bis(dimethyl acetal) 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-12-7, Fischer's base 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9D, Indole, derivs. 120-80-9, 1,2-Benzenediol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3 122-31-6, Malonaldehyde bis(diethyl acetal) 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 542-78-9D, Malonaldehyde, derivs., acetals 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6 623-09-6, 4-Methylaminoaniline 624-67-9D, 2-Propynal, acetals 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6,

2,4,5,6-Tetraaminopyrimidine 1004 75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid 3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2, 4-Aminoquinoline 6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7, 2-(2-Hydroxyethyl)phenol 10160-87-9, 3,3-Diethoxy-1-propyne 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0, 3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine 22537-06-0, 3,3-Dimethoxy-1-propyne 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 39567-92-5 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 59845-59-9 60320-10-7 61224-35-9 61693-42-3 62496-02-0, 2-(Methylamino)-4,5,6-triaminopyrimidine 65099-93-6 65099-94-7, Malonaldehyde bis(dibutyl acetal) 66566-48-1 66635-40-3 69549-51-5 69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0 80030-92-8 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8, 3-Amino-2-(methylamino)-6-methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7 114402-54-9 115423-86-4 126335-41-9 128729-30-6 130582-56-8 135043-64-0 137290-86-9 **144644-13-3** 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9 220118-56-9 223383-77-5 223399-01-7 223399-02-8 223399-03-9

RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); USES (Uses)

(use of malonaldehyde derivs. for dyeing fibers contg. keratin)

L3 ANSWER 14 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:81666 CAPLUS

DOCUMENT NUMBER: 130:143947

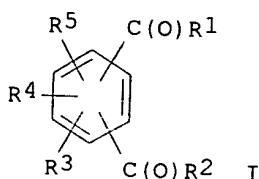
TITLE: Application of di-and oligoacyl aromatic compounds for

INVENTOR(S): dyeing keratin fibers
 PATENT ASSIGNEE(S): Moeller, Hinrich; Hoeffkes, Horst
 SOURCE: Henkel K.-G.a.A., Germany
 Ger. Offen., 12 pp.

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

CODEN: GWXXRX

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19731400	A1	19990128	DE 1997-19731400	19970722
WO 9904754	A1	19990204	WO 1998-EP4332	19980713
W: AU, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9885421	A1	19990216	AU 1998-85421	19980713
EP 998256	A1	20000510	EP 1998-936419	19980713
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, FI				
PRIORITY APPLN. INFO.:			DE 1997-19731400	19970722
			WO 1998-EP4332	19980713
OTHER SOURCE(S):			MARPAT 130:143947	
GI				



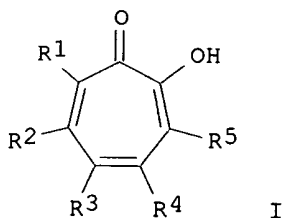
- AB The title compds. (I; R1, R2 = C1-4 alkyl, aryl, heteroaryl; R3-R5 = H, halo, C1-4 alkyl, C1-4 alkoxy, C1-4 hydroxyalkoxy, OH, NO2, NH2, C1-4 acyl; R1 and R2 may not be 1,2-diacetyl), combined with primary or secondary amines or OH compds. and active CH compds., are useful as hair dyes which do not require the use of an oxidizing agent. These dyes provide excellent brilliance and depth of color with many color nuances. Thus, a mixt. of 1,4-diacetylbenzene 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. in 100 mL H2O was heated to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray hair for 30 min at 30.degree. to produce a dark violet color.
- IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 120-80-9, 1,2-Benzenediol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic

acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6,
 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5,
 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4,
 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9,
 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4,
 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5,
 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
 2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5,
 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3,
 1-Ethylquinaldinium iodide 608-25-3 610-74-2, 2,5-Diaminobenzoic acid
 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone
 615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4,
 1,2,4-Triaminobenzene 619-05-6 623-09-6, 4-Methylaminoaniline
 636-25-9, 2,5-Diaminophenol 704-00-7, 1,2-Diacetylbenzene 779-90-8,
 1,3,5-Triacetylbenzene 876-87-9, 1-Methylquinaldinium iodide
 934-22-5,
 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1009-61-6,
 1,4-Diacetylbenzene 1123-55-3, 7-Aminobenzothiazole 1123-93-9,
 5-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3,
 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole
 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1770-96-3 1820-80-0,
 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1,
 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2767-73-9 2785-06-0,
 2,3-Dimethylbenzothiazolium iodide 2835-99-6, 3-Methyl-4-aminophenol
 3131-52-0, 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric
 acid 3167-49-5, 6-Aminonicotinic acid 3855-78-5, 2,3,4-
 Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine 4331-29-7,
 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene
 tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-
 Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1,
 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-
 Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1,
 2-Aminonicotinic acid 5392-28-9 5418-63-3, 1,2,3,3-Tetramethyl-3H-
 indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2,
 Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
 6201-65-6,
 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2, 4-Aminoquinaldine
 6781-42-6, 1,3-Diacetylbenzene 6967-12-0, 6-Aminoindazole 7169-34-8,
 Coumaranone 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
 phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
 7768-28-7, 2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine
 14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0, 3,5-Diaminopyrazole
 16867-03-1, 2-Amino-3-hydroxypyridine 18019-57-3 19335-11-6,
 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine
 20724-48-5
 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
 naphthalenedisulfonic acid 24119-24-2 25394-13-2, Sodium
 4,4'-diaminostilbene-2,2'-disulfonate 28020-38-4, 2,3-Diamino-6-
 methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 33630-99-8,
 3-Amino-2-hydroxypyridine 41927-50-8 41946-53-6 53666-79-8
 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0,
 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 60320-10-7
 61224-35-9 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
 triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6,
 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1
 79352-72-0 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine
 84540-50-1 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,
 4-Hydroxyindoline 89725-66-6 90817-30-4 90817-34-8,

3-Amino-2-methylamino-6-methoxypyridine 93841-24-8, 2-(2,5-
Diaminophenyl)ethanol 93841-25-9 104333-09-7 115423-86-4
126335-41-9 28729-30-6 130582-56-8 13111-31-2 135043-64-0
137290-86-9 144644-13-3 147801-94-3 147801-97-6
159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5
202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9
220118-52-5 220118-53-6 220118-56-9
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(application of di-and oligoacyl arom. compds. for dyeing keratin
fibers)

L3 ANSWER 15 OF 32 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1998:716277 CAPLUS
 DOCUMENT NUMBER: 129:347139
 TITLE: Use of tropolones for dyeing keratin fibers
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
 PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
 SOURCE: Ger. Offen., 10 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19717225	A1	19981029	DE 1997-19717225	19970424
OTHER SOURCE(S):	MARPAT 129:347139			
GI				



AB Tropolone derivs. [I; R1-R5 = H, halo, C1-4 alkyl; or R1R2 completes a (substituted) condensed benzo group] are components of nonoxidative or oxidative hair dyes with improved intensity and fastness toward light, washing, and friction and cause little or no skin sensitization. I are applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups to produce yellow, orange, brown, blue-black, and black colorations. Thus, purpurogallin 10, 2,4,5,6-tetraaminopyrimidine sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to 6. Gray hair exposed to this soln. for 30 min at 30.degree. took on an orange-brown color.

IT **144644-13-3**
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (use of benzylidene ketones for dyeing keratin fibers)

L3 ANSWER 16 OF 32 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1998:716118 CAPLUS
 DOCUMENT NUMBER: 129:347138
 TITLE: Use of amino vinyl aldehydes and ketones for dyeing keratin fibers
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst; Meinigke, Bernd
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Germany

SOURCE: Eur. Pat. Appl., 16 pp.

DOCUMENT TYPE: CODEN: EPXXDW

LANGUAGE: Patent

FAMILY ACC. NUM. COUNT: 1 German

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 873746	A2	19981028	EP 1998-106959	19980416
EP 873746	A3	19991222		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19717223	A1	19981029	DE 1997-19717223	19970424
PRIORITY APPLN. INFO.:			DE 1997-19717223	19970424

OTHER SOURCE(S): MARPAT 129:347138

AB The title compds., R1R2N(CR3:CR4)nCR5:CR6C(O)R7 [I; R1, R2 = H, alkyl, hydroxyalkyl, (substituted) Ph, or R1NR2 = heterocyclic ring; R3-R7 = H, C1-4 alkyl, halo; n = 0-2; if n = 1, R4 and R6, or R6 and R7, may together

form a ring], are components of nonoxidative or oxidative hair dyes which provide an intensity and fastness of color comparable to conventional oxidative dyes and cause little or no skin sensitization. I alone impart hair colors mainly in the yellow spectral region; I may be applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups to produce yellow, orange, brown, and black coloration. Thus, 3-dimethylaminoacrolein 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to

6.

Gray hair exposed to this soln. for 30 min at 30.degree. took on a reddish-brown color.

IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine,

biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 116-63-2 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-15-1, Indoline 496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5,

8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
 2-Aminoquinoline
 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 4-Aminophenol 603-81-6,
 2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol
 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6,
 3,4-Diaminobenzoic acid 623-09-6 636-25-9, 2,5-Diaminophenol
 876-87-9 927-63-9, 3-Dimethylaminoacrolein 934-22-5,
 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,
 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1190-91-6
 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-
 triazole 1497-49-0 1571-72-8, 3-Amino-4-hydroxybenzoic acid
 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1,
 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
 2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-aminophenol
 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole
 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic
 acid 3855-78-5, 2,3,4-Trimethylpyrrole 4030-58-4 4318-76-7,
 2,5-Diaminopyridine 4331-29-7, 4-Aminobenzimidazole 4506-66-5,
 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4688-60-2,
 5-Dimethylamino-2,4-pentadienal 4928-43-2 5007-67-0,
 3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1,
 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-
 Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1,
 2-Aminonicotinic acid 5434-20-8, 3-Aminophthalic acid 5718-83-2,
 Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
 6201-65-6,
 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2, 4-Aminoquinaldine
 6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1, Disodium
 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1,
 N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
 2-(2-Hydroxyethyl)phenol
 13044-92-3, 7-Dimethylamino-2,4,6-heptatrienal 13754-19-3,
 4,5-Diaminopyrimidine 14189-80-1 14189-81-2 14189-83-4
 14268-66-7,
 3,4-Methylenedioxyaniline 16082-33-0, 3,5-Diaminopyrazole 16867-03-1,
 2-Amino-3-hydroxypyridine 17774-41-3 19125-78-1 19335-11-6,
 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine
 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
 naphthalenedisulfonic acid 24119-24-2 25186-34-9, 3-Aminoacrolein
 25920-13-2 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5,
 5,6-Dihydroxyindoline 41927-50-8 41946-53-6 49647-58-7,
 2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3,
 4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-
 hydroxyethylamino)phenol 56216-28-5 58064-22-5 58262-44-5
 60159-98-0 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
 triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6,
 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1
 76319-97-6 79352-72-0 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-
 dimethylpyridine 84540-50-1 85679-78-3, 3,5-Diamino-2,6-
 dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 89728-31-4
 90817-34-8, 3-Amino-2-methylamino-6-methoxypyridine 90945-00-9
 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7
 110102-86-8 114402-54-9 115423-86-4 128729-30-6 130582-56-8
 135043-64-0 137290-86-9 144644-13-3 147920-20-5
 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5
 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9
 215377-53-0 215377-55-2 215377-56-3 215523-40-3 215523-41-4
 215523-42-5 215523-44-7 215523-54-9

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(use of a o vinyl aldehydes and ketones dyeing keratin fibers)

L3 ANSWER 17 OF 32 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:716117 CAPLUS
DOCUMENT NUMBER: 129:347137
TITLE: Ketones and aldehydes for dyeing keratin fibers
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst; Meinigke, Bernd
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Germany
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 873745	A2	19981028	EP 1998-106833	19980415
EP 873745	A3	19991222		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

DE 19717222 A1 19981029 DE 1997-19717222 19970424

PRIORITY APPLN. INFO.: DE 1997-19717222 19970424

AB Nonoxidative or oxidative hair dye compns. are provided which contain (a)
.gtoreq.1 ketone and/or aldehyde which dyes hair either alone or in the
presence of (b) .gtoreq.1 compd. with a primary or secondary amino or
hydroxy group, together with (c) a color-reinforcing agent comprising
piperidine, pyridine, imidazole, pyrrolidine, pyrrolidone, pyrazole,
triazole, piperidazine, or their derivs. or salts. These compns. provide
an intensity and fastness of color comparable to conventional oxidative
dyes and cause little or no skin sensitization. These compns. impart

hair

colors over a wide spectral range, from yellow-orange to brown-black.
Thus, a suspension of glutaconaldehyde Na salt 10, 2-(2,5-
diaminophenyl)ethanol sulfate 10, piperidine 10, NaOAc 10 mmol, and 1

drop

20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the
suspension

was heated briefly to 80.degree., cooled, and filtered, and the pH was
adjusted to 6. Gray hair exposed to this soln. for 30 min at 30.degree.
took on an intense red-violet color.

IT 144644-13-3

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(use of benzylidene ketones for dyeing keratin fibers)

L3 ANSWER 18 OF 32 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:716116 CAPLUS
DOCUMENT NUMBER: 129:347136
TITLE: Use of heterocyclic carbonyl compounds for dyeing
keratin fibers
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst; Meinigke, Bernd
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Germany
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 873744	A2	19981028	EP 1998-106832	19980415

AB Heterocyclic carbonyl compds. RXC(O)R1 [R = 5-7-membered (substituted) heterocyclic ring with 1-3 hetero atoms (N, O, S); X = bond, CH:CH; R1 = H, (substituted) C1-6 alkyl] are components of nonoxidative or oxidative hair dyes which provide an intensity and fastness of color comparable to oxidative dyes and cause little or no skin sensitization. These compds. alone impart hair colors mainly in the yellow and red spectral regions; they may be applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups

to produce yellow, orange, brown, and black colorations with improved brilliance and fastness. Thus, a suspension of indole-3-aldehyde 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to

6.

Gray hair exposed to this soln. for 30 min at 30.degree. took on an intense brown color.

- IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 66-72-8, Pyridoxal 67-52-7, Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene 84-83-3 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-01-1, Furfural, biological studies 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 116-63-2 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 326-91-0, 2-Thenoyltrifluoroacetone 350-03-8, 3-Acetylpyridine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 487-89-8, 1H-Indole-3-carboxaldehyde 488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 500-22-1, 3-Pyridinaldehyde 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid

611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
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 3,4-Diaminobenzoic acid 623-09-6 623-30-3, (2-Furyl)acrolein
 636-25-9, 2,5-Diaminophenol 698-63-5, 5-Nitrofurfural, biological
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 934-22-5, 5-Aminobenzimidazole 950-81-2 1004-74-6,
 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-
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 2-Acetylpyridine 1123-55-3, 7-Aminobenzothiazole 1125-60-6,
 5-Aminoisoquinoline 1192-58-1 1197-55-3, 4-Aminophenylacetic acid
 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-
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 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
 2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-aminophenol
 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole
 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic
 acid 3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyrimidine
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 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole
 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5318-27-4,
 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5416-80-8 5434-20-8,
 3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid 5959-52-4,
 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol 6259-50-3
 6399-72-0 6628-04-2, 4-Aminoquinoline 6967-12-0, 6-Aminoindazole
 7169-34-8, Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-
 disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
 phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
 7768-28-7, 2-(2-Hydroxyethyl)phenol 10111-08-7, 1H-Imidazole-2-
 carboxaldehyde 13669-42-6, 3-Quinolinecarboxaldehyde 13754-19-3,
 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline
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 2-Hydroxy-4,5,6-triaminopyrimidine 22948-94-3 23244-87-3,
 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
 naphthalenedisulfonic acid 24119-24-2 28020-38-4, 2,3-Diamino-6-
 methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 29788-34-9
 41927-50-8 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine
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 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0,
 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 58262-44-5
 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine
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 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4, 4-Hydroxyindoline
 90817-34-8, 3-Amino-2-methylamino-6-methoxypyridine 93841-24-8,
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 111423-75-7 114402-54-9 115423-86-4 128729-30-6 130582-56-8
 135043-64-0 137290-86-9 144644-13-3 159661-42-4
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 202525-77-7 202525-78-8 202525-79-9 215377-52-9 215377-53-0
 215377-55-2 215377-56-3

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(use of heterocyclic carbonyl compds. for dyeing keratin fibers)

L3 ANSWER 19 OF 32 CAPLUS COPYRIGHT 2000 ACS

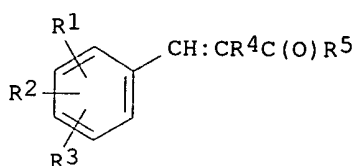
ACCESSION NUMBER: 1998:716115 CAPLUS

DOCUMENT NUMBER: 129:347135

TITLE: use or benzylidene ketones for dyeing keratin fibers
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst; Meinigke, Bernd
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Germany
 SOURCE: Eur. Pat. Appl., 15 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 873743	A2	19981028	EP 1998-106831	19980415
EP 873743	A3	19991215		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19717281	A1	19981029	DE 1997-19717281	19970424
PRIORITY APPLN. INFO.:			DE 1997-19717281	19970424
OTHER SOURCE(S):			MARPAT 129:347135	

GI



- AB Benzylidene ketones [I; R1-R3 = H, halo, alkyl, hydroxyalkyl, aminoalkyl, alkoxy, (hydroxy)alkylamino, N-heterocyclyl, NO2, CO2H, SO3H; R4 = H, C1-4 alkyl, C1-4 acyl; R5 = C1-4 alkyl; or R4R5 = (substituted) C1-5 alkylene] are components of nonoxidative or oxidative hair dyes which provide an intensity and fastness of color comparable to oxidative dyes and cause little or no skin sensitization. I alone impart hair colors mainly in the yellow spectral region; I may be applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups to produce orange, brown, violet, green, and black coloration. Thus, a suspension of 3,4-methylenedioxybenzylideneacetone 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to 6. Gray hair exposed to this soln. for 30 min at 30.degree. took on a violet color.
- IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3,

1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene
 108-73-6, Phloroglucinol 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3,
 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide
 119-70-0,
 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol,
 biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3,
 4-Aminobenzenesulfonic acid 122-57-6, Benzylideneacetone 123-30-8
 123-31-9, 1,4-Benzenediol, biological studies 139-65-1,
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 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies
 150-13-0
 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5,
 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4,
 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9,
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 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
 2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol
 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6,
 3,4-Diaminobenzoic acid 623-09-6 636-25-9, 2,5-Diaminophenol
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 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole
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 3167-49-5, 6-Aminonicotinic acid 3855-78-5, 2,3,4-Trimethylpyrrole
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 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-
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 Benzylidenecyclohexanone 5718-83-2, Rhodanine-3-acetic acid
 5959-52-4,
 3-Amino-2-naphthoic acid 6051-53-2, 2-Hydroxybenzylideneacetone
 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2,
 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone
 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6
 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
 2-(2-Hydroxyethyl)phenol
 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline
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 2,5-Dichloro-p-phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-
 triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7,
 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2 28020-38-4,
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41927 50-0 41946-53-6 42426-33-7 49641-58-7, 2,4,5,6-
Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3,
4,4'-Diaminodimethylamine sulfate 55302-96-0 2-Methyl-5-(2-
hydroxyethylamino)phenol 56216-28-5 58262-44-5 61078-47-5
61078-48-6 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
triaminopyrimidine 63053-27-0, 3-(4-Dimethylaminobenzylidene)-2,4-
pentanedione 65443-86-9 66566-48-1 66635-40-3 67805-13-4
69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol
74918-21-1 79352-72-0 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-
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3-Amino-2-methylamino-6-methoxypyridine 93841-24-8, 2-(2,5-
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202525-78-8 202525-79-9 215377-52-9 215377-53-0 215377-55-2
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RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(use of benzylidene ketones for dyeing keratin fibers)

L3 ANSWER 20 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:708908 CAPLUS
DOCUMENT NUMBER: 129:347134
TITLE: Use of unsaturated aldehydes in dyeing keratin fibers
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Germany
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847473	A1	19981029	WO 1998-EP2243	19980416
W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19717224	A1	19981029	DE 1997-19717224	19970424
AU 9875264	A1	19981113	AU 1998-75264	19980416
EP 977546	A1	20000209	EP 1998-922727	19980416
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE				
NO 9905157	A	19991022	NO 1999-5157	19991022
PRIORITY APPLN. INFO.:			DE 1997-19717224	19970424
			WO 1998-EP2243	19980416

OTHER SOURCE(S): MARPAT 129:347134

AB Unsatd. aldehydes, HCO(CR1:CR2)nCHR3C(O)R4 .tautm.
HCO(CR1:CR2)nCR3:C(OH)R4 (I; R1-R4 = H, halo, alkyl, alkoxy, aryl,
alkoxyaryl; n = 1, 2; if n = 1, R1 and R2, R1 and R3, R2 and R3, or R2
and
R4 may together form a 5-7-membered ring) and the corresponding acetals
are components of nonoxidative or oxidative hair dyes which provide an
intensity and fastness of color comparable to oxidative dyes and cause
little or no skin sensitization. I alone impart hair colors mainly in
the
yellow and red spectral regions; I may be applied together with primary
or
secondary amines, N-heterocyclic compds., arom. OH compds., or compds.
with active CH groups to produce yellow, orange, red, brown, blue, and
black colorations. Thus, 2-chloro-1-formyl-3-hydroxymethylenecyclohexene
10, 2-(2,5-diaminophenyl)ethanol sulfate 10, NaOAc 10 mmol, and 1 drop

was

fatty alkyl ether sulfate were suspended in 100 mL H₂O, the suspension

heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to 6. Gray hair exposed to this soln. for 30 min at 30.degree. took on a violet-blue color.

IT

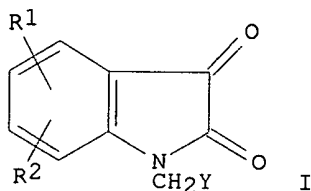
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RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(use of benzylidene ketones for dyeing keratin fibers)

L3 ANSWER 21 OF 32 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1998:708907 CAPLUS
 DOCUMENT NUMBER: 129:347133
 TITLE: Use of 1-substituted isatins to dye fibers containing keratin
 INVENTOR(S): Moeller, Hinrich; Rose, David; Hoeffkes, Horst; Meinigke, Bernd
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Germany
 SOURCE: PCT Int. Appl., 39 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847472	A1	19981029	WO 1998-EP2199	19980415
W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19717282	A1	19981029	DE 1997-19717282	19970424
AU 9873353	A1	19981113	AU 1998-73353	19980415
EP 977545	A1	20000209	EP 1998-920524	19980415
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, FI				
PRIORITY APPLN. INFO.:			DE 1997-19717282	19970424
			WO 1998-EP2199	19980415
OTHER SOURCE(S):			MARPAT 129:347133	
GI				



AB Isatin derivs. [I; R1, R2 = H, halo, OH, C1-4 alkyl, hydroxyalkyl, tertiary aminoalkyl, alkoxy, (substituted) amino, NO2, CO2H, SO3H; Y = OH, C1-4 alkoxy, (substituted) amino, 5-7-membered heterocyclyl] are components of nonoxidative or oxidative hair dyes,. I alone impart hair colors mainly in the yellow spectral region; I may be applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups to produce intense orange, brown, violet, and black colorations in a variety of hues. Thus, 1-pyrrolidinomethylisatin 10,
 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane-4HCl 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to 6. Gray hair exposed to this soln. for 30 min at 30.degree. took on a reddish-violet color.

IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol

88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid
 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3,
 1-Naphthol 20-0, 4-Amino-5-hydroxynaphthalene 2,7-disulfonic acid
 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5,
 o-Phenylenediamine,
 biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene
 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic
 acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol
 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid
 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9,
 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological
 studies 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3,
 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene
 108-73-6, Phloroglucinol 116-63-2 118-70-7, 4,5,6-Triaminopyrimidine
 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide
 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9,
 Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid
 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9,
 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl
 sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7,
 Gallic acid, biological studies 150-13-0 150-19-6, 3-Methoxyphenol
 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0,
 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8,
 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-73-1,
 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6,
 Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0,
 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3,
 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5,
 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5,
 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
 2-Aminoquinoline
 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
 2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol
 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6,
 3,4-Diaminobenzoic acid 623-09-6 636-25-9, 2,5-Diaminophenol
 876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6,
 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-
 triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6,
 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid 1455-77-2,
 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid
 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1,
 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
 2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-aminophenol
 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole
 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic
 acid 3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
 4331-29-7, 4-Aminobenzimidazole 4506-66-5, 1,2,4,5-Tetraaminobenzene
 tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-
 Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1,
 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-
 Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1,
 2-Aminonicotinic acid 5434-20-8, 3-Aminophthalic acid 5718-83-2,
 Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
 6201-65-6,
 2-Chlororesorcinol 6259-50-3 6399-72-0 6532-16-7,
 1-Morpholinomethylisatin 6628-04-2, 4-Aminoquinaldine 6967-12-0,
 6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1, Disodium
 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1,
 N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
 2-(2-Hydroxyethyl)phenol

13129-67-4 13129-68-5 13129-69-6 13754-19-3, 4,5-Diaminopyrimidine
 14268-66-7, 3,4-Methylenedioxyaniline 15032-11-7 16082-33-0,
 3,5-Diaminopyrrole 16867-03-1, 2-Amino-3-hydroxypyridine 19335-11-6,
 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine
 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
 naphthalenedisulfonic acid 24119-24-2 28020-38-4, 2,3-Diamino-6-
 methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 41927-50-8
 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate
 50899-59-7, 1-Hydroxymethylisatin 53003-19-3 53003-20-6 53666-79-8
 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0,
 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 58262-44-5
 58979-56-9 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
 triaminopyrimidine 64258-84-0 66566-48-1 66635-40-3 68549-78-0
 69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol
 74918-21-1 79352-72-0 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-
 dimethylpyridine 84540-50-1 84677-32-7 85679-78-3,
 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4, 4-Hydroxyindoline
 90817-34-8, 3-Amino-2-methylamino-6-methoxypyridine 93841-24-8,
 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7 110102-86-8
 114402-54-9 115423-86-4 128729-30-6 130582-56-8 135043-64-0
 137290-86-9 **144644-13-3** 159661-42-4 202525-71-1
 202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7
 202525-78-8 202525-79-9 215377-39-2 215377-40-5 215377-41-6
 215377-42-7 215377-43-8 215377-44-9 215377-45-0 215377-46-1
 215377-47-2 215377-48-3 215377-49-4 215377-50-7 215377-51-8
 215377-52-9 215377-53-0 215377-55-2 215377-56-3
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(use of substituted isatins to dye keratin fibers)

L3 ANSWER 22 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:87808 CAPLUS

DOCUMENT NUMBER: 128:158724

TITLE: Oxidative dyes containing aldehydes for
 keratin-containing fibers

INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst

PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19630275	A1	19980129	DE 1996-19630275	19960726
EP 820759	A2	19980128	EP 1997-112194	19970717
EP 820759	A3	19981021		

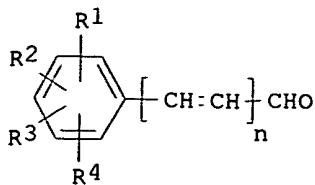
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI

PRIORITY APPLN. INFO.:

DE 1996-19630275 19960726

OTHER SOURCE(S): MARPAT 128:158724

GI



- AB Direct hair dyes contg. an aldehyde I (R1-R4 = H, halo, C1-4 alkyl or alkoxy, C2-4 hydroxyalkyl, C1-4 aminoalkyl, NO₂, CO₂H, SO₃H, etc.; n = 0, 1) and a dye precursor comprising a primary or secondary arom. amine, an N-contg. heterocycle, an arom. hydroxy compd., an amino acid, and/or an oligopeptide may be used either with or without addn. of oxidizing agents such as H₂O₂. In either case, the dyes show excellent color intensity in a wide range of color nuances from yellowish-orange to brownish-black, excellent color fastness, and very low sensitizing potential. Thus, a soln. contg. equal parts of 2,3,4-trihydroxybenzaldehyde and 2-aminomethyl-4-aminophenol-Dihydrochloride produced a strong brownish-orange color on gray hair.
- IT 60-18-4, L-Tyrosine, biological studies 65-49-6, 4-Aminosalicylic acid 71-00-1, L-Histidine, biological studies 73-22-3, L-Tryptophan, biological studies 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid
- 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 90-02-8, Salicylaldehyde, biological studies 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-65-9 95-01-2, 2,4-Dihydroxybenzaldehyde 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-31-0, 5-Aminoisophthalic acid 99-98-9, 4-Dimethylaminoaniline 100-10-7, 4-Dimethylaminobenzaldehyde 101-77-9 101-80-4 108-45-2, m-Phenylenediamine, biological studies 108-72-5, 1,3,5-Triaminobenzene 109-97-7, Pyrrole 116-63-2, 4-Amino-3-hydroxynaphthalene-1-sulfonic acid
- 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 121-33-5, Vanillin 121-47-1, 3-Aminobenzenesulfonic acid
- 121-57-3, 4-Aminobenzenesulfonic acid 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-86-6, 2,6-Diaminopyridine 147-85-3, L-Proline, biological studies 150-13-0, 4-Aminobenzoic acid 150-75-4, 4-Methylaminophenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 458-36-6, Coniferyl aldehyde 462-08-8, 3-Aminopyridine 504-29-0, 2-Aminopyridine 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6, 3,4-Diaminobenzoic acid 623-09-6 636-25-9, 2,5-Diaminophenol 934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1194-98-5, 2,5-Dihydroxybenzaldehyde 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 2144-08-3 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-aminophenol 2836-04-6, 3-Dimethylaminoaniline 3131-52-0, 5,6-Dihydroxyindole 3167-49-5, 6-Aminonicotinic acid 4318-76-7, 2,5-Diaminopyridine 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1,

7-Aminoindole 5192-23-4, 4-Aminoindole 5307-02-8, 2,5-Diaminoanisole
 5318-27-4, 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5434-20-8,
 3-Aminophthalic acid 5959-52-4, 3-Amino-2-naphthoic acid 6203-18-5,
 4-Dimethylaminocinnamaldehyde 6399-72-0 6628-04-2, 4-Aminoquinoline
 6967-12-0, 6-Aminoindazole 7336-20-1, Disodium
 4,4'-diaminostilbene-2,2'-
 disulfonate 7411-49-6 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline
 16082-33-0, 3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
 17754-90-4, 4-Diethylamino-2-hydroxybenzaldehyde 19335-11-6,
 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine
 23244-87-3, 2,4,5-Pyridinetriamine 24119-24-2 28020-38-4,
 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate
 53666-79-8
 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 54381-16-7 55302-96-0,
 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 61693-42-3
 62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine 66566-48-1
 66635-40-3 69984-77-6, 7-Aminobenzimidazole 74918-21-1 79352-72-0
 81892-72-0, 1,3-Bis(2,4-diaminophenoxy)propane 83732-72-3 84540-47-6,
 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1,
 2-Methyl-5-amino-6-chlorophenol 85679-78-3, 2,6-Dimethoxy-3,5-
 diaminopyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8
 93841-24-8,
 2-(2,5-Diaminophenyl)ethanol 93841-25-9 110102-86-8 114402-54-9
 115423-86-4 126335-41-9 128729-30-6 130582-56-8 135043-64-0
 137290-86-9 **144644-13-3** 159661-42-4 **159661-45-7**
 202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6
 202525-77-7 202525-78-8 202525-79-9
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (oxidative dyes contg. aldehydes for keratin-contg. fibers)

L3 ANSWER 23 OF 32 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1996:337879 CAPLUS
 DOCUMENT NUMBER: 125:13295
 TITLE: 2-Hydroxy-1-ethanone derivatives for dyeing
 keratin-containing fibers, especially human hair
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
 PATENT ASSIGNEE(S): Henkel KgaA, Germany
 SOURCE: Ger. Offen., 10 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4434494	A1	19960328	DE 1994-4434494	19940927
WO 9609807	A1	19960404	WO 1995-EP3669	19950918

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 PRIORITY APPLN. INFO.: DE 1994-4434494 19940927
 OTHER SOURCE(S): MARPAT 125:13295

AB The title compds., which give good coloration in the absence of oxidants,
 have the structure $R_1COCH(OH)R_2$ [R_1 = alkyl, (substituted) aryl,
 (substituted) furyl, thenyl, pyridyl; R_2 = the above or H; or R_1 and R_2
 can form a ring optionally contg. H or O]. A mixt. of 10 mmol each
 benzoin, 2,5-toluenediamine (I), and NaOAc in 100 mL H₂O contg. an
 anionic

surfactant dyed graying human hair an intense brownish-violet in 30 min
 at

30.degree.; vs. no dyeing without I.

IT 95-70-5D, 2,5-Toluenediamine, reaction products with .alpha.-

hydroxyketones 9G-2G-4B, Dihydroxyacetone, reaction products with arom. amines 116-02-6D, Hydroxyacetone, reaction products with arom. amines 119-53-9D, Benoin, reaction products with arom. amines 513-86-0D, Acetoin, reaction products with arom. amines 619-05-6D, 3,4-Diaminobenzoic acid, reaction products with .alpha.-hydroxyketones 2198-59-6D, reaction products with .alpha.-hydroxyketones 6219-73-4D, N,N-Dimethyl-p-phenylenediamine sulfate, reaction products with .alpha.-hydroxyketones 30587-18-9D, Anisoin, reaction products with arom. amines 49647-58-7D, reaction products with .alpha.-hydroxyketones 63886-74-8D, reaction products with .alpha.-hydroxyketones 72315-09-4D, reaction products with .alpha.-hydroxyketones 84540-47-6D, reaction products with .alpha.-hydroxyketones 85679-78-3D, reaction products with

.alpha.-hydroxyketones 90817-34-8D, reaction products with
.alpha.-hydroxyketones 135043-64-0D, reaction products with
.alpha.-hydroxyketones 159621-77-9D, reaction products with
.alpha.-hydroxyketones **159661-45-7D**, reaction products with
.alpha.-hydroxyketones 177264-59-4D, reaction products with
.alpha.-hydroxyketones

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

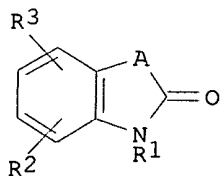
(hydroxyethanone derivs. for dyeing keratin-contg. fibers, esp. human hair)

L3 ANSWER 24 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1995:563533 CAPLUS
DOCUMENT NUMBER: 123:92867
TITLE: Indolinone derivatives as hair dye components
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4335623	A1	19950420	DE 1993-4335623	19931019

OTHER SOURCE(S): MARPAT 123:92867
GI



I

AB Indolinone derivs. I [R1 = Ph, C1-4 alkyl, C2-4 hydroxyalkyl or carboxyalkyl; R2, R3 = H, halo, C1-4 alkyl, C1-4 alkoxy, C1-4 alkanoyl, NO2, OH, SO3H, NH2, CO2H; A = CHOH, C:NR4; R4 = H, OH, (substituted) amino, C1-4 alkyl, CO2H, SO3H, phenylalkyl, etc.] are useful in combination with amines, amino acids, peptides, N-contg. heterocycles, and arom. hydroxy compds. as components of hair dyes. Thus, a suspension of 5-bromo-3-hydroxy-2-indolinone 10, p-toluylenediamine.H2SO4 10, NaOAc 10 mmol, and 1 drop 20% aq. fatty alkyl ether sulfate soln. was heated to boiling, cooled, filtered, and adjusted to pH 6. Thus, a suspension of 5-bromo-3-hydroxy-2-indolinone 10, p-toluylenediamine.H2SO4 10, NaOAc 10 mmol, and 1 drop 20% aq. fatty alkyl ether sulfate soln. was heated to

boiling, cooled, filtered, and adjusted to pH 6. Gray hair dyed for 30 min in this soln. had an intense violet-red color.

IT 56-87-1, L-Lysine, biological studies 59-92-7, DOPA, biological studies 60-18-4, Tyrosine, biological studies 61-71-2, 3-Hydroxy-2-indolinone 63-91-2, Phenylalanine, biological studies 70-26-8, Ornithine 71-00-1, Histidine, biological studies 73-22-3, Tryptophan, biological studies 74-79-3, Arginine, biological studies 612-53-3 615-50-9 619-05-6, 3,4-Diaminobenzoic acid 6219-73-4, N,N-Dimethyl-p-phenylenediamine sulfate 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 54381-16-7, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine sulfate 68738-86-3 83732-72-3 99304-37-7 135043-64-0 144644-13-3 159621-77-9

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(indolinone derivs. as hair dye components)

L3 ANSWER 25 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1995:561561 CAPLUS

DOCUMENT NUMBER: 123:92866

TITLE: Ethanediones as hair dye components

INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst

PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany

SOURCE: Ger. Offen., 13 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4335625	A1	19950420	DE 1993-4335625	19931019
WO 9511002	A1	19950427	WO 1994-EP3328	19941010

W: US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: DE 1993-4335625 19931019

OTHER SOURCE(S): MARPAT 123:92866

AB Ethanediones R1C(O)C(O)R2 [R1, R2 = C1-5 alkyl, (substituted) aryl, (substituted) furyl, (substituted) thienyl, (substituted) pyridyl; or R1R2

complete a (substituted) 4-7-membered (alkylene-bridged) ring; or R1R2 = naphthalene-1,8-diyl, 1,1'-biphenylene] are useful in combination with amines, amino acids, peptides, N-contg. heterocycles, and arom. hydroxy compds. as components of hair dyes. Thus, a suspension of diacetyl 10, p-toluylenediamine.H2SO4 10, NaOAc 10 mmol, and 1 drop 20% aq. fatty alkyl

ether sulfate soln. was heated to boiling, cooled, filtered, and adjusted to pH 6. Gray hair dyed for 30 min in this soln. had a dark brown color.

IT 51-78-5, 4-Aminophenol hydrochloride 56-87-1, L-Lysine, biological studies 59-92-7, DOPA, biological studies 60-18-4, Tyrosine, biological studies 63-91-2, Phenylalanine, biological studies 70-26-8,

Ornithine 71-00-1, Histidine, biological studies 73-22-3, Tryptophan, biological studies 74-79-3, Arginine, biological studies 82-86-0, Acenaphthenequinone 84-11-7, 9,10-Phenanthrenequinone 95-54-5, o-Phenylenediamine, biological studies 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 134-81-6, Benzil 431-03-8, Diacetyl 492-73-9, 2,2'-Pyridil 492-94-4, Furil 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 579-07-7, 1-Phenyl-1,2-propanedione 615-50-9 619-05-6, 3,4-Diaminobenzoic acid 6219-73-4, N,N-Dimethyl-p-phenylenediamine sulfate 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 54381-16-7, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine sulfate

68738-86-3 74918-21 1 03732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-
dimethylpyridine 135043-64-0 144644-13-3 153621-77-9
163078-04-4

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(ethanediones as hair dye components)

L3 ANSWER 26 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1995:551238 CAPLUS
DOCUMENT NUMBER: 122:298692
TITLE: 1,3-Propanediones as hair dye components
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
SOURCE: Ger. Offen., 7 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4335627	A1	19950420	DE 1993-4335627	19931019
WO 9511001	A1	19950427	WO 1994-EP3327	19941010

W: US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRIORITY APPLN. INFO.: DE 1993-4335627 19931019

OTHER SOURCE(S): MARPAT 122:298692

AB 1,3-Propanediones R1C(O)CHR2C(O)R3 [R1-R3 = H, C1-4 alkyl, C1-4 oxoalkyl, furyl, thienyl, pyridyl, or S(substituted) Ph, benzyl, or Bz, or R1R3 complete a (substituted) 5-7-membered ring which may be fused with an arom. ring system] and their acetals and ketals are useful in combination with amines, amino acids, peptides, N-contg. heterocycles, and arom. hydroxy compds. as components of hair dyes. Thus, a suspension of 1,3-indandione 10, 2-methylamino-3-amino-6-methoxypyridine-2HCl 10, NaOAc 10 mmol, and 1 drop 20% aq. Texapon N25 soln. was heated to boiling, cooled, filtered, and adjusted to pH 6. Gray hair dyed for 30 min in this soln. had an intense dark brown color.

IT 51-78-5, p-Aminophenol hydrochloride 55-55-0, N-Methyl-p-aminophenol sulfate 56-87-1, Lysine, biological studies 59-92-7, DOPA, biological studies 60-18-4, Tyrosine, biological studies 63-91-2, Phenylalanine, biological studies 70-26-8, Ornithine 71-00-1, Histidine, biological studies 73-22-3, Tryptophan, biological studies 74-79-3, Arginine, biological studies 109-97-7, Pyrrole 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 542-78-9D, Malondialdehyde, derivs. 606-23-5, 1,3-Indandione 615-50-9 3566-44-7 6219-73-4, N,N-Dimethyl-p-phenylenediamine sulfate 6219-89-2 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 74918-21-1 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 93841-25-9 135043-64-0 **144644-13-3**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

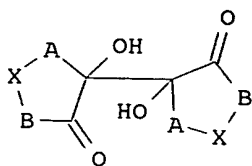
(propanediones as hair dye components)

L3 ANSWER 27 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1995:551237 CAPLUS
DOCUMENT NUMBER: 122:298691
TITLE: 1,1-Bis(1-hydroxy-2-oxo) compounds as hair dye components
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
SOURCE: Ger. Offen., 7 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent

LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4335628	A1	19950420	DE 1993-4335628	19931019
OTHER SOURCE(S): MARPAT 122:298691				
GI				



I

AB 1,1-Bis(1-hydroxy-2-oxo) compds. I (A = CH₂, C:O; B = CH₂, NR₁; X = CH₂, CH₂CH₂, NR₂CO; R₁, R₂ = H, C1-4 alkyl, C2-4 hydroxyalkyl) and fused-ring analogs thereof are useful in combination with amines, amino acids, peptides, N-contg. heterocycles, and arom. hydroxy compds. as components of hair dyes. Thus, a suspension of hydrindantin 10, p-toluylenediamine.H₂SO₄ 10, NaOAc 10 mmol, and 1 drop 20% aq. fatty alkyl ether sulfate soln. was heated to boiling, cooled, filtered, and adjusted to pH 6. Gray hair dyed for 30 min in this soln. had an intense blue-black color.

IT 51-78-5, p-Aminophenol hydrochloride 56-87-1, Lysine, biological studies

59-92-7, DOPA, biological studies 60-18-4, Tyrosine, biological studies 63-91-2, Phenylalanine, biological studies 70-26-8, Ornithine

71-00-1,

Histidine, biological studies 73-22-3, Tryptophan, biological studies 74-79-3, Arginine, biological studies 464-73-3, Isatide 615-50-9

5103-42-4, Hydrindantin 6219-73-4, N,N-Dimethyl-p-phenylenediamine sulfate 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate

144644-13-3 163078-04-4

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(1,1-bis(1-hydroxy-2-oxo) compds. as hair dye components)

L3 ANSWER 28 OF 32 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1995:518760 CAPLUS

DOCUMENT NUMBER: 122:273760

TITLE: 1,2-Naphthoquinonesulfonic or -carboxylic acid-containing compositions for dyeing keratinaceous fibers

INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst

PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany

SOURCE: Ger. Offen., 7 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4318742	A1	19941208	DE 1993-4318742	19930605
WO 9428862	A1	19941222	WO 1994-EP1732	19940527
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 701428	A1	19960320	EP 1994-918804	19940527
EP 701428	B1	19970502		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE
 AT 152345 E 19970515 AT 1994-918804 19940527
 ES 2100722 T3 19970616 ES 1994-8804 19940527
 DE 1993-4318742 19930605
 WO 1994-EP1732 19940527
 PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 122:273760

AB Aq. compns. contg. a 1,2-naphthoquinonesulfonic or carboxylic acid and an amino acid, peptide, aniline deriv., aliph. amine, phenol deriv., BzOH deriv., or N-heterocyclic compd. are useful as hair dyes. Thus, a compn. contg. 10 mM 1,2-naphthoquinone-4-sulfonic acid, 10 mM p-phenylenediamine,

and 10 mM NaOAc (pH 6.0) imparted a reddish-brown color to the hair.
 IT 59-92-7, L-DOPA, biological studies 60-18-4, L-Tyrosine, biological studies 70-26-8, L-Ornithine 71-00-1, L-Histidine, biological studies 73-22-3, L-Tryptophan, biological studies 106-50-3, p-Phenylenediamine, biological studies 109-97-7, Pyrrole 118-70-7, 4,5,6-Triaminopyrimidine 608-25-3, 2-Methylresorcinol 2066-93-5, 1,2-Naphthoquinone-4-sulfonic acid 3204-61-3, 1,2,4,5-Tetraaminobenzene 21905-89-5 28165-63-1 29539-03-5, 5,6-Dihydroxyindoline 66635-40-3 79352-72-0 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1 144644-13-3

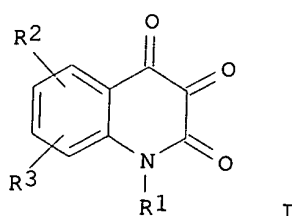
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(naphthoquinonesulfonic or -carboxylic acid-contg. compns. for dyeing keratinaceous fibers)

L3 ANSWER 29 OF 32 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1995:330980 CAPLUS
 DOCUMENT NUMBER: 122:114595
 TITLE: Quinisatins for dyeing of hair
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
 PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
 SOURCE: Ger. Offen., 6 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4317854	A1	19941201	DE 1993-4317854	19930528

OTHER SOURCE(S): MARPAT 122:114595
 GI



AB Quinisatins I (R1 = H, C1-4 alkyl, C2-4 hydroxyalkyl; R2, R3 = H, halo, C1-4 alkyl, C1-4 alkoxy, NO2, OH, SO3H, CO2H) are useful for dyeing keratin fibers, esp. human hair. I confer yellow nuances when used alone,

or can be combined with amines, amino acids, peptides, or N-contg. heterocycles to provide brilliant yellow, brown, green, or violet colors which are fast towards light, washing, and friction. Thus, a suspension contg. I (R1-R3 = H) 10, 1,3-bis(2,4-diaminophenoxy)propane-4HCl 10, and

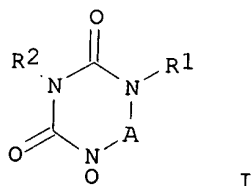
and NaOAc 10 mmol in 100 mL water was heated to boiling, cooled, filtered, adjusted to pH 6. The resulting soln. conferred a dark brown color on gray hair.

IT 54-12-6D, DL-Tryptophan, reaction products with quinisatin 56-87-1D, Lysine, reaction products with quinisatins 59-92-7D, DOPA, reaction products with quinisatins 60-18-4D, Tyrosine, reaction products with quinisatins 63-91-2D, Phenylalanine, reaction products with quinisatins 70-26-8D, Ornithine, reaction products with quinisatins 71-00-1D, Histidine, reaction products with quinisatins 73-22-3D, Tryptophan, reaction products with quinisatins 74-79-3D, Arginine, reaction products with quinisatins 615-50-9D, 2,5-Diaminotoluene sulfate, reaction products with quinisatin 3565-42-2, Quinisatin 3565-42-2D, Quinisatin, derivs., reaction products with amines and amino acids 5392-28-9D, reaction products with quinisatin 74918-21-1D, reaction products with quinisatin 135043-64-0D, reaction products with quinisatin 159621-77-9D, reaction products with quinisatin 159661-45-7D, reaction products with quinisatin

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(quinisatins for dyeing of hair)

L3 ANSWER 30 OF 32 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:309043 CAPLUS
DOCUMENT NUMBER: 122:89075
TITLE: Alloxan and isobarbituric acid derivatives for dyeing of hair
INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4317850	A1	19941201	DE 1993-4317850	19930528
OTHER SOURCE(S):	MARPAT 122:89075			
GI				



AB Alloxan and isobarbituric acid derivs. I (R1, R2 = H, C1-4 alkyl, C2-4 hydroxyalkyl, C2-4 acyl, Ph, PhCH2; A = CH2, C:O) are useful for dyeing keratin fibers, esp. human hair. I confer yellow nuances when used alone, or can be combined with amines, amino acids, peptides, or N-contg. heterocycles to provide brilliant yellow, red, or violet colors which are fast towards light, washing, and friction. Thus, a suspension contg. alloxan 1, 1,3-bis(2,4-diaminophenoxy)propane-4HCl 1, and NaOAc 1 mmol in 100 mL water was heated to boiling, cooled, filtered, and adjusted to pH 6. The resulting soln. conferred a brown color on gray hair.

IT 51-35-4D, Hydroxyproline, reaction products with alloxan and isobarbituric

acid derivs. 52-90-4D, Cysteine, reaction products with alloxan and isobarbituric acid derivs. 56-40-6D, Glycine, reaction products with alloxan and isobarbituric acid derivs. 56-41-7D, Alanine, reaction products with alloxan and isobarbituric acid derivs. 56-45-1D, Serine, reaction products with alloxan and isobarbituric acid derivs. 56-84-8D, Aspartic acid, reaction products with alloxan and isobarbituric acid derivs. 56-86-0D, Glutamic acid, reaction products with alloxan and isobarbituric acid derivs. 56-87-1D, Lysine, reaction products with alloxan and isobarbituric acid derivs. 56-89-3D, Cystine, reaction products with alloxan and isobarbituric acid derivs. 59-92-7D, DOPA, reaction products with alloxan and isobarbituric acid derivs. 60-18-4D, Tyrosine, reaction products with alloxan and isobarbituric acid derivs. 61-90-5D, Leucine, reaction products with alloxan and isobarbituric acid derivs. 63-68-3D, Methionine, reaction products with alloxan and isobarbituric acid derivs. 63-91-2D, Phenylalanine, reaction products with alloxan and isobarbituric acid derivs. 70-26-8D, Ornithine, reaction products with alloxan and isobarbituric acid derivs. 71-00-1D, Histidine, reaction products with alloxan and isobarbituric acid derivs. 72-18-4D, Valine, reaction products with alloxan and isobarbituric acid derivs. 72-19-5D, Threonine, reaction products with alloxan and isobarbituric acid derivs. 73-22-3D, Tryptophan, reaction products with alloxan and isobarbituric acid derivs. 73-32-5D, Isoleucine, reaction products with alloxan and isobarbituric acid derivs. 74-79-3D,

Arginine,

reaction products with alloxan and isobarbituric acid derivs. 95-54-5D, 1,2-Phenylenediamine, reaction products with alloxan and isobarbituric acid derivs. 99-98-9D, N,N-Dimethyl-p-phenylenediamine, reaction products with alloxan and isobarbituric acid derivs. 106-50-3D, p-Phenylenediamine, reaction products with alloxan and isobarbituric acid derivs. 123-30-8D, 4-Aminophenol, reaction products with alloxan and isobarbituric acid derivs. 147-85-3D, Proline, reaction products with alloxan and isobarbituric acid derivs. 615-50-9D, 2,5-Diaminotoluene sulfate, reaction products with alloxan and isobarbituric acid derivs. 2835-96-3D, 2-Methyl-4-aminophenol, reaction products with alloxan and isobarbituric acid derivs. 2835-99-6D, 3-Methyl-4-aminophenol, reaction products with alloxan and isobarbituric acid derivs. 4506-66-5D, 1,2,4,5-Tetraaminobenzene tetrahydrochloride, reaction products with alloxan and isobarbituric acid derivs. 6393-01-7D, 2,5-Dimethyl-1,4-phenylenediamine, reaction products with alloxan and isobarbituric acid derivs. 26878-35-3D, 2,5-Diaminopyridine dihydrochloride, reaction products with alloxan and isobarbituric acid derivs. 35011-47-3D, reaction products with alloxan and isobarbituric acid derivs. 66635-40-3D, reaction products with alloxan and isobarbituric acid

derivs.

74918-21-1D, reaction products with alloxan and isobarbituric acid

derivs.

79352-72-0D, reaction products with alloxan and isobarbituric acid

derivs.

84540-47-6D, 2,6-Dihydroxy-3,4-dimethylpyridine, reaction products with alloxan and isobarbituric acid derivs. 93841-24-8D, reaction products with alloxan and isobarbituric acid derivs. 93841-25-9D, reaction products with alloxan and isobarbituric acid derivs. **144644-13-3D**, reaction products with alloxan and isobarbituric acid derivs. **159661-45-7D**, reaction products with alloxan and isobarbituric acid derivs. 160430-99-9D, reaction products with alloxan and isobarbituric acid derivs.

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

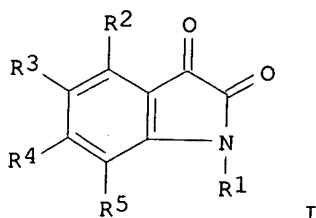
(Uses)

(for dyeing of hair)

L3 ANSWER 31 OF 32 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:248743 CAPLUS
DOCUMENT NUMBER: 122:38518

TITLE: Isatin-containing compositions as hair dyes
 INVENTOR(S): Moeller, Hinrich; Hoeffkes, Horst
 PATENT ASSIGNEE(S): Henkel KGaA, Germany
 SOURCE: Ger. Offen., 13 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4314317	A1	19941103	DE 1993-4314317	19930430
WO 9424988	A1	19941110	WO 1994-EP1246	19940421
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 695162	A1	19960207	EP 1994-915084	19940421
EP 695162	B1	19970618		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE				
JP 08509478	T2	19961008	JP 1994-523838	19940421
AT 154509	E	19970715	AT 1994-915084	19940421
ES 2105707	T3	19971016	ES 1994-915084	19940421
US 5616150	A	19970401	US 1995-535261	19951030
PRIORITY APPLN. INFO.:			DE 1993-4314317	19930430
			WO 1994-EP1246	19940421
OTHER SOURCE(S):		MARPAT 122:38518		
GI				



- AB Isatin derivs. I [R1 = H, C1-4 alkyl, C2-4 hydroxyalkyl, C2-20 acyl,, Bz, Ph; R2-R5 = H, C1-4 alkyl, C1-4 alkoxy, OH, halo, NO2, SO3H, CO2H, (substituted) amino] combined with amines, aniline derivs., or heterocyclic or isocyclic compds. without primary NH2 groups are useful as direct dyes for hair and other natural and synthetic fibers. The color intensity is enhanced by addn. of metal or ammonium salts. Thus, a paste of isatin 10, ethanolamine 1, and NaOAc 10 mmol in 100 mL H2O was heated to boiling, cooled, filtered, adjusted to pH 6 with HCl, and used to impart a coppery color to gray hair.
- IT 62-53-3D, Aniline, derivs. 65-49-6, 4-Aminosalicylic acid 72-17-3, Sodium lactate 77-86-1 78-90-0, 1,2-Diaminopropane 78-91-1, 2-Aminopropanol 87-51-4, 1H-Indole-3-acetic acid, biological studies 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 91-21-4 91-56-5, Isatin 91-56-5D, Isatin, derivs. 91-95-2, 3,3',4,4'-Tetraaminodiphenyl 96-54-8, 1-Methylpyrrole 99-05-8, 3-Aminobenzoic acid 99-31-0, 5-Aminoisophthalic acid 101-77-9, 4,4'-Diaminodiphenylmethane 103-76-4, 1-(2-Hydroxyethyl)piperazine 103-82-2, 2-Phenylacetic acid, biological studies 107-15-3, 1,2-Ethanediamine, biological studies 109-76-2, 1,3-Diaminopropane 109-96-6, 3-Pyrroline 109-97-7, Pyrrole 110-00-9, Furan 110-02-1, Thiophene 110-76-9, 2-Ethoxyethylamine 110-85-0, Piperazine, biological studies 110-89-4, Piperidine, biological studies 111-40-0 111-41-1, 2-(2-Aminoethylamino)ethanol 115-69-5, 2-Amino-2-methylpropane-

1,3-diol 116-63-7, 4-Amino-3-hydroxyphthalic acid
 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-diaminodiphenyl sulfoxide
 120-72-9, Indole, biological studies 121-47-3, 3-Aminobenzenesulfonic
 acid 121-57-3, 4-Aminobenzenesulfonic acid 123-75-1, Pyrrolidine,
 biological studies 124-68-5, 2-Amino-2-methylpropanol 127-08-2,
 Potassium acetate 127-09-3, Sodium acetate 139-65-1,
 4,4'-Diaminodiphenyl sulfide 140-31-8, 1-(2-Aminoethyl)piperazine
 141-43-5, biological studies 150-13-0, 4-Aminobenzoic acid 156-87-6,
 3-Aminopropanol 288-13-1, Pyrazole 288-32-4, Imidazole, biological
 studies 299-28-5, Calcium gluconate 444-27-9, Thiazolidine-4-
 carboxylic acid 496-15-1, Indoline 498-94-2, Piperidine-4-carboxylic
 acid 498-95-3, Piperidine-3-carboxylic acid 504-78-9, Thiazolidine
 506-87-6, Ammonium carbonate 534-03-2, 2-Aminopropane-1,3-diol
 535-75-1, Piperidine-2-carboxylic acid 535-87-5 537-65-5,
 4,4'-Diaminodiphenylamine 546-89-4, Lithium acetate 603-81-6,
 2,3-Diaminobenzoic acid 608-08-2, Indoxyl acetate 608-25-3,
 2-Methylresorcinol 608-97-9, Benzenepentamine 610-74-2,
 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3,
 4,4'-Diaminobenzophenone 616-29-5, 1,3-Diamino-2-propanol 616-30-8,
 2,3-Dihydroxypropylamine 616-43-3, 3-Methylpyrrole 619-05-6,
 3,4-Diaminobenzoic acid 621-96-5, 4,4'-Diaminostilbene 625-84-3,
 2,5-Dimethylpyrrole 631-61-8, Ammonium acetate 634-97-9,
 Pyrrole-2-carboxylic acid 636-41-9, 2-Methylpyrrole 929-06-6,
 2-(2-Aminoethoxy)-ethanol 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
 1122-58-3, 4-Dimethylaminopyridine 1453-58-3, 3-Methylpyrazole
 1477-50-5, 2-Indolecarboxylic acid 1571-72-8, 3-Amino-4-hydroxybenzoic
 acid 1918-77-0, Thiophene-2-acetic acid 2374-03-0,
 4-Amino-3-hydroxybenzoic acid 2836-32-0, Sodium glycolate 3204-61-3,
 1,2,4,5-Tetraaminobenzene 3416-24-8, D-Glucosamine 4444-26-2,
 Benzenhexamine 4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride
 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5434-20-8, 3-Aminophthalic
 acid 7313-70-4, Isatin-5-sulfonic acid 7336-20-1 7429-90-5D,
 Aluminum, salts 7439-89-6D, Iron, salts 7439-91-0D, Lanthanum, salts
 7439-93-2D, Lithium, salts 7439-95-4D, Magnesium, salts 7439-96-5D,
 Manganese, salts 7440-00-8D, Neodymium, salts 7440-02-0D, Nickel,
 salts 7440-09-7D, Potassium, salts 7440-10-0D, Praseodymium, salts
 7440-22-4D, Silver, salts 7440-23-5D, Sodium, salts 7440-24-6D,
 Strontium, salts 7440-32-6D, Titanium, salts 7440-39-3D, Barium,
 salts 7440-45-1D, Cerium, salts 7440-48-4D, Cobalt, salts 7440-50-8D,
 Copper, salts 7440-54-2D, Gadolinium, salts 7440-66-6D, Zinc, salts
 7440-70-2D, Calcium, salts 7535-00-4, D-Galactosamine 7646-85-7, Zinc
 chloride, biological studies 13066-97-2 13531-52-7 14572-93-1,
 2-(2,4-Diaminophenyl)ethanol 25448-04-8, Tetrahydroquinoline
 27841-29-8 56344-32-2 66635-40-3 73793-79-0 74918-21-1
 79352-72-0 81892-72-0, 1,3-Bis(2,4-diaminophenoxy)-propane
 84540-47-6,
 2,6-Dihydroxy-3,4-dimethylpyridine 93841-24-8 126335-43-1
 133914-70-2 159661-40-2 159661-41-3 159661-42-4 159661-43-5
 159661-44-6 159661-45-7 159661-46-8 159959-66-7
 159959-67-8

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(isatin-amine combinations as hair dyes)

L3 ANSWER 32 OF 32 CAPLUS COPYRIGHT 2000 ACS

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DOCUMENT NUMBER: 117:235825

TITLE: Bis(2,5-diaminophenoxy)oxaalkanes, their preparation
 and use as oxidative hair dye developers

INVENTOR(S): Rose, David; Hoeffkes, Horst; Lieske, Edgar

PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany

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AB $\text{ROCnH}_2\text{n}(\text{OCnH}_2\text{n})\text{xOR}$ [$\text{R} = 2,5-(\text{H}_2\text{N})_2\text{C}_6\text{H}_3$; $\text{n} = 2, 3$; $\text{x} = 1-3$] were prepd.
Thus, $\text{R}'(\text{OCH}_2\text{CH}_2)_3\text{OR}'$ ($\text{R}' = 5\text{-nitro-2-aminophenyl}$) was hydrogenated over
Pd/C to give, after acidification, $\text{R}(\text{OCH}_2\text{CH}_2)_3\text{OR.4HCl}$. Nineteen examples
of developer-coupler combinations are given.

IT **144644-13-3P** 144644-14-4P 144644-15-5P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. of, as oxidative hair dye coupler)